

**RETIRING TOGETHER OR WORKING ALONE:
THE IMPACT OF SPOUSAL EMPLOYMENT
AND DISABILITY ON RETIREMENT DECISIONS**

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**Retiring Together or Working Alone:
The Impact of Spousal Employment and Disability on Retirement Decisions**

Abstract

Husbands and wives often coordinate retirement decisions, as many married workers withdraw from the labor force at about the same time as their spouses. However, joint retirement behavior may differ for couples in which one spouse retires with health problems. In those cases, the able-bodied spouse may delay retirement to compensate for the earnings lost by the disabled spouse. This paper examines the retirement decisions of husbands and wives and how they interact with spousal health and employment, using data from the 1992-1998 waves of the Health and Retirement Study. The results indicate that both men and women are more likely to retire if their spouses have already retired than if they are still working. However, they are less likely to retire if their spouses appear to have left the labor force because of health problems, especially when spouses are not yet eligible for Social Security retirement benefits. There is no evidence that spousal caregiving demands affect retirement rates.

A growing literature on the joint labor supply behavior of husbands and wives examines how married couples coordinate retirement decisions. These studies have shown that spouses often retire at about the same time as each other, generally because they prefer to spend their leisure time together. However, little is known about how labor supply responds when spouses retire for health reasons. If a worker with health problems retires at a relatively early age, the spouse may remain at work (or enter the labor force if not currently employed) to compensate for the loss in family income, instead of retiring early with the frail spouse. Alternatively, the healthy spouse may choose to work fewer hours in order to devote time to the care of the frail partner. Thus, the simultaneity in spousal retirement behavior may depend critically upon health status.

How married individuals respond to spousal disability has important implications for families. The ability to delay retirement can provide insurance against the loss of family earnings that often results when spouses develop serious health problems. By working additional hours per week or delaying their own retirement, husbands and wives may be able to replace at least part of the family income that was lost when their spouses were forced to retire because of health problems. However, if individuals withdraw from the labor force to provide personal care assistance when their spouses become disabled, then the onset of disability can have especially serious financial repercussions for families.

This paper examines the retirement decisions of husbands and wives and how they interact with spousal health and employment status, using recent, nationally representative data from the Health and Retirement Study (HRS). The HRS is particularly well-suited for our study, because the survey includes detailed longitudinal information on labor supply and health status for a sample of individuals at midlife and their spouses. We begin by comparing employment

status for married women and men by the health and employment of their spouses. We then estimate multivariate models of retirement to examine the impact of spousal employment and health on labor supply decisions. We find that both men and women were more likely to retire if their spouses had already retired than if they were still working. However, they were less likely to retire if their spouses appeared to have left the labor force because of health problems, especially when spouses were not yet eligible for Social Security retirement benefits. We find little evidence that spousal caregiving responsibilities affect retirement decisions.

BACKGROUND

A growing literature recognizes that retirement decisions are made within the context of the family and that husbands and wives often coordinate their labor supply at older ages. Several studies have documented the large fraction of married persons who retire at about the same time as their spouses. Defining and measuring joint retirement of married couples is complex, because the meaning of retirement can be ambiguous, spouses generally differ in age, and longitudinal surveys frequently censor life histories on both the left and right sides, i.e., prior to the first interview and after the last interview. Blau (1998) estimated that between 30 and 40 percent of married couples exited the labor force within a year of each other, depending on the exact definition of retirement he used. His estimates were based on data from the Retirement History Survey (RHS), which followed a sample of men and unmarried women born between 1906 and 1911 for ten years, until 1979. Hurd (1988) found that about one quarter of couples in the New Beneficiary Survey (NBS) retired within a year of each other and a significant percentage (between 6 and 9 percent) retired in the same month. Conducted by the Social Security Administration in 1992, the NBS surveyed persons born between 1910 and 1918, slightly later than the cohort interviewed by the RHS. Using data on a sample of married persons

in the HRS born between 1931 and 1941 and observed through 1998, Johnson and Favreault (forthcoming) estimated that between 22 and 40 percent of husbands and wives retired within two years of each other, depending on how they treated censored observations. Taken together, these three studies indicate that in many couples husbands and wives retire at about the same time, although the proportion appears to be declining over time.

A number of studies have found that retirement rates for married workers increase when their spouses retire or when their spouses are not working (e.g., Blau 1998; Gustman and Steinmeier 2000, Johnson and Favreault, forthcoming). Joint retirement outcomes appear to be driven in large part by the widespread preference of husbands and wives to spend their leisure time together. Economists typically model labor supply decisions by assuming that individuals strike an optimal balance between the costs of foregone leisure and the benefits of increased income associated with paid employment. If married individuals place greater value on leisure time when they can spend it with their spouses, then retirement rates will increase when the spouse is not working. The results of models estimated by Gustman and Steinmeier (2000) and Hurd (1988) support the hypothesis that individuals view their own leisure time and the leisure time of the spouse as complements. Coile's (2000) findings are also consistent with this hypothesis. She found that retirement rates in the HRS responded to own financial incentives created by employer-provided pension plans and Social Security and by "spillover effects" from the spouses' incentives. Coile attributed the existence of spillover effects to efforts by spouses to coordinate their retirement decisions. Financial incentives created by retirement plans affect the worker's retirement decisions, which in turn affect the behavior of the spouse.

Less empirical support has been found for other possible explanations of joint retirement, such as assortative mating and the similarity of financial incentives faced by husbands and

wives. Individuals may tend to marry those who share similar preferences about work and leisure. As a result, the timing of retirement may coincide for husbands and wives because of assortative mating, not because husbands and wives carefully coordinate work and leisure activities. They also may face similar financial incentives on the job. However, Hurd's (1988) models suggest that only a small part of the joint retirement decision can be explained by financial incentives, and his cross-tabulations rule out spousal selection as a central explanation. Gustman and Steinmeier (2000) also concluded that financial incentives cannot account for joint retirement outcomes.

Sociologists who study joint retirement have tended to focus on a different set of determinants than have economists. The factors that they have emphasized include norms, features of individuals' family and career trajectories (including the history of role occupancy earlier in the life course), social aspects of transitions to new roles, and gender role attitudes. For example, Henretta, O'Rand, and Chan (1993a, 1993b) examined how sequences of life events influence couples' retirement, using data from the NBS. In one study, they used event history techniques to explore how each spouse affects the other's retirement decisions, accounting for early life investments in different social roles (1993b). They found that women's employment during childrearing is associated with earlier withdrawal from the labor force. Their results suggest that family roles are more important for wives' decisions than for husbands', though husbands do react to more proximate factors, such as their wives' current work status.

In a companion piece, Henretta, O'Rand, and Chan (1993a) restricted their analysis to couples in which one spouse had already retired. They found no evidence that women retire earlier or re-enter the labor force more slowly than men. However, they found significant interactions between gender and other important characteristics in their model, suggesting that

while overall rates of retirement may be similar, the process differs for men and women. These interactions become less important when the spouses' employment careers are more similar.

The determinants of retirement also appear to differ for husbands and wives. For example, several studies have found that family issues and roles are more important for wives than for husbands (Henretta, O'Rand, and Chan 1993b; Pienta 1998; Szinovacz 1989). At the same time, men appear more likely than women to withdraw from the labor force in order to spend more time with their spouses (Gustman and Steinmeier 2000; Coile 2000). Women's tendency to occupy multiple roles with high salience throughout adulthood while their husbands, who also occupy many roles, identify more strongly with a smaller number of them (particularly the role of provider) may account for both of these findings.

Relatively little attention has been devoted to the question of how the coordination of retirement decisions by married couples varies with the circumstances surrounding the spouse's withdrawal from the labor force. When workers retire voluntarily, perhaps because of generous pension benefits, their spouses may generally be able to follow them into retirement. However, when workers retire involuntarily, because of health problems or job displacement, for example, financial considerations may force spouses to remain at work. In order to finance the consumption needs of the family, spouses may continue to work and replace at least part of the earnings lost by the retired spouse. Pienta (1997), for example, found that married individuals were less likely to retire if their spouses reported work limitations than if they were not disabled. In cases of severe disability, however, spouses may reduce their work hours to devote additional time to providing personal care assistance to the frail husband or wife.

Economists have generally been skeptical of the notion of involuntary retirement. Except for outcomes in command economies, they believe that most (if not all) economic decisions are

made by weighing costs and benefits, and thus in some sense are always voluntary. Moreover, workers who claim that they retired involuntarily because of health problems may be trying to justify their decision to stop work early in a society that values hard work. In reality, their decisions may have been motivated by the presence of generous pension or insurance benefits.¹ However, there is evidence that some workers with health problems retire earlier than they expected, and that they suffer financial losses, in terms of foregone wages and reduced pensions (Dwyer and Mitchell 1998; Burkhauser, Couch, and Phillips 1996). Job displacement in later life can also have long-lasting effects (Chan and Stevens 1999). For at least some workers, labor force exits may not always be voluntary. The circumstances of the withdrawal may affect labor supply decisions of the spouse.

In this paper we examined how the employment and health status of the spouse affect retirement decisions. Our study was based on the economic assumption that individuals make labor supply decisions so as to maximize utility subject to budget constraints and that they value consumption and leisure. Standard labor supply models predict that drops in family income will induce individuals to reduce leisure time and increase hours of work, to lessen the impact of income loss on consumption levels. Thus, reductions in spousal earnings can encourage individuals to increase hours of work. However, married men and women may place more value on their own leisure time when their spouses are not working. As a result, the retirement of a spouse may encourage married men and women to reduce their hours of work and devote more time to leisure activities. The predicted net effect of spouse's labor supply on retirement decisions is ambiguous. The income effect may dominate when the spouse's retirement is

¹ See Quinn, Burkhauser, and Myers (1990) for a critique of early studies of involuntary retirement.

involuntary, suggesting that individuals may delay retirement when the spouse stops working because of health problems.

DATA AND MEASURES

To investigate the effect of spousal employment and health on labor supply decisions, we examined data from the first four waves of the HRS. Sponsored by the National Institute on Aging and conducted by the University of Michigan, the HRS provides rich longitudinal information on labor supply, health, employment histories, income, and assets for a large sample of Americans at midlife. Because it collects data over time from both husbands and wives for a large sample of married couples in their fifties and sixties, it is particularly well suited for the study of how spouses coordinate their retirement decisions.

The HRS consists of data collected from personal interviews with a nationally representative sample of noninstitutionalized individuals born between 1931 and 1941 and their spouses (regardless of age). Blacks, Hispanics, and Florida residents were sampled at twice their rates in the general population. Baseline interviews were completed for 9,825 respondents between the ages of 51 and 61 in 1992.² Follow-up interviews were completed for 8,843 respondents in 1994, 8,471 respondents in 1996, and 8,232 respondents in 1998. At the 1998 interview, respondents ranged in age from 57 to 67. We restricted our sample to respondents who were married. There were 3,498 married women and 3,681 married men in the 1992 baseline interview.

One of the strengths of the HRS is the quality of the health information it collects. At each wave of interviews, respondents were asked a series of questions about their history of

² Information was also collected from 2,827 individuals older than 61 or younger than 51 who were married to age-eligible respondents.

medical problems, physical impairments, overall health status, and whether they had any impairments or health problems that limited the type or amount of paid work they could perform. Those with health-related work limitations were asked if they were able to work at all. They were also asked if they had ever applied for disability benefits from the Social Security Administration, the Veterans Administration, Workers' Compensation, or other sources, and whether they were currently receiving disability benefits.

We created an index measuring the severity of functional impairments reported by respondents. At each wave respondents were asked whether they had difficulty with any of the following activities: walking several blocks; walking one block; walking across a room; sitting for about two hours; getting up from a chair after sitting for long periods; climbing several flights of stairs without resting; climbing one flight of stairs without resting; stooping, kneeling, or crouching; reaching or extending arms above shoulder level; pulling or pushing large objects; lifting or carrying weights more than 10 pounds; and picking up a dime from a table. The severity index was set equal to the number of activities with which the respondent reported having difficulty.³ In the 1992 wave, when respondents were between the ages of 51 and 61, 78 percent of married women and 63 percent of married men reported at least one impairment, and 23 percent of married women and 13 percent of married men reported more than two impairments. Functional impairments were more prevalent among the husbands of married women in the sample than among the married men in the sample, because many of the husbands were older than 61 at baseline. Fully 22 percent of husbands in 1992 and 34 percent of husbands in 1996 reported more than two impairments.

³ Some respondents reported that they did not do certain activities. We assumed that they would have difficulty with these tasks if they attempted to perform them.

The HRS also collects detailed information on labor supply and retirement decisions. At each wave respondents were asked whether they were working for pay and, if not, whether they were looking for work. Respondents who were not working at the time of the interview were asked whether they left their last job because the business closed, they were laid off, they developed health problems, they needed to care for family members, they wanted to retire, or some other reason. Individuals who cited poor health, lay-offs, or business closings may have retired involuntarily. Respondents who reported work disabilities were questioned about the impact of their health problems on family members. In particular, they were asked whether their spouses, parents, children, or other family members began to work, worked more hours, worked fewer hours, or stopped working once health problems began to limit the respondent's ability to work.

Finally, respondents were asked about their pension coverage, attitudes about retirement, and financial assets. At each wave, workers in the HRS indicated whether they had pension coverage on the current job and if so whether they participated in defined benefit plans or defined contribution plans.⁴ In addition, respondents still at work were asked about their retirement plans and the importance of several factors associated with retirement. In particular, they were asked whether "being able to take it easy" was very important, moderately important, somewhat important, or not important at all. Respondents who had already retired were asked how important these factors were to their retirement decisions.⁵ Those who reported that they

⁴ Self-reported pension information in the HRS may be unreliable, because many workers are not well informed about their pension plans. For example, more than one-third of full-time workers in the HRS with defined contribution plans reported that they participated only in defined benefit plans (Johnson, Sambamoorthi, and Crystal 2000).

⁵ Respondents were also asked about the importance of lack of pressure, being their own boss, having more time with their spouse or children, spending more time on hobbies, sports or volunteer work, or the chance to travel. However, our preliminary analyses indicated that these attitudes were not related to retirement behavior, so we did not include them in our final models.

never planned to retire were not asked about the importance of different aspects of retirement. The HRS also collected detailed information on wealth holdings. We measured financial assets by totaling the value of the respondent's stocks, bonds, savings and checking accounts, money markets funds, CDs, IRAs and Keoghs, and subtracting any debts.

METHODS

To examine the impact of spousal employment and health on labor supply, we estimated multivariate models of the retirement decision. For each respondent in the sample, we created a separate record for each year he or she remained in the labor force. Each time respondents were observed at work, we observed whether they retired in the next period. Workers were dropped from the panel once they retired. We assumed that individuals were retired if they were not employed at the time of the survey and they were not looking for work.⁶ Retirement outcomes were observed up to three times for each worker in our sample (1994, 1996, and 1998). The sample was restricted to 1,249 married women and 2,377 married men who were working full-time at the time of the baseline interview. Proxy interviews were also dropped from the sample.⁷ We considered only full-time workers at baseline because we wished to eliminate from the sample part-time workers who may have already partially retired. There were 2,919 person-year observations for women and 5,806 person-year observations for men.

⁶ We did not distinguish between workers who considered themselves to be retired and those who considered themselves to be disabled. We experimented with different hours of work thresholds for the retirement definition, such as less than 20 hours per week or less than 10 hours per week, but these alternative definitions did not significantly affect our results.

⁷ Non-proxy baseline interviews were completed for 1,346 married women who worked full-time and 2,465 married men who worked full-time. We dropped 59 women from the sample because their husbands were not interviewed and another 38 women because they were missing information on key variables. We also dropped 87 men from the sample because their wives were not interviewed and one man because of missing data problems.

As noted above, we expected that the work status of the spouse would be an important determinant of retirement behavior for married persons, and that the impact may depend on whether the spouse retired voluntarily or involuntarily. It was important that our model recognized the endogeneity of spousal work status, because spousal work behavior is a choice variable that may be determined jointly with the individual's own retirement decision. Unobservable characteristics that affect the work decisions for one spouse are likely to be correlated with unobservable characteristics that affect the work decisions of the other spouse. For example, women may tend to marry men with similar preferences for work and leisure, which are not measured well in the HRS (or any other survey that we know of). Treating spousal work status as an exogenous variable in the retirement equation and ignoring the potential correlation of unobserved factors that affect work decisions could bias our estimates.

We accounted for the endogeneity of spousal work status by using full information maximum likelihood techniques to model jointly retirement decisions and spousal work status. We estimated the following model of the respondent's retirement decision (*Retire*) and the spouse's nonemployment status (*Spnotwork*):

$$Retire_{it+1} = \mathbf{g}_1 Spnotwork_{it} + \mathbf{b}'_1 x_{1it} + \mathbf{e}_{1it} \quad (1)$$

$$Spnotwork_{it} = \mathbf{b}'_2 x_{2it} + \mathbf{e}_{2it}, \quad (2)$$

where t indexes the time period and i indexes couples. The endogenous variables were both binary. *Retire* was set equal to one if the respondent retired in the next period, and *Spnotwork* was set equal to one if the spouse was not employed in the current period. We assumed that the error terms in equations 1 and 2 were drawn from a bivariate normal distribution, to allow for the possibility that unobservable factors affecting the retirement decision of one spouse were

correlated with unobservable factors affecting the other spouse's employment. The models were estimated separately for women and men.⁸

The vector X_t in equation 1 included measures of health, age, race, education, financial wealth, pension coverage, and attitudes towards retirement. Except for financial wealth, which was measured at baseline, all variables were measured at time t . Health status was measured by the number of functional impairments and by dummies for self-rated overall health status (very good, good, fair, or poor, relative to excellent). Age entered the regression as a series of dummy variables, indicating whether the respondent was between the ages of 54 and 56, 57 and 60, or 61 or older; the reference group consisted of those younger than 54. Because the early entitlement age for Social Security retirement benefits is 62, we expected that workers ages 61 or older would be particularly likely to retire over the next two years. Educational attainment can influence retirement because better educated workers tend to earn higher wages, increasing the cost of retiring, and tend to hold jobs that impose fewer physical demands on workers. Financial wealth should increase retirement rates by enabling retirees to maintain their pre-retirement level of consumption despite the loss in earnings by drawing down their assets. We expected that workers who reported that "being able to take it easy" was only somewhat or not at all important to the retirement decision would be less likely to retire than workers who were more concerned about the level of work effort required by the current job.

We also included dummy variables in equation 1 indicating defined benefit pension coverage and defined contribution pension coverage on the current job. Because pension wealth in defined benefit plans can accrue unevenly and often declines sharply after the plan's normal

⁸ The model was specified recursively, with spousal employment entering equation 1 but retirement outcomes not entering equation 2. Because the system of equations modeled discrete outcomes, the model would be logically inconsistent if it were estimated as a simultaneous system (Maddala 1983).

retirement age, defined benefit plans often provide workers with strong incentives to retire. These incentives are not generally present in defined contribution plans, in which wealth generally builds steadily over time. As a result, we expected that coverage by defined benefit plans would affect workers differently than coverage by defined contribution plans.

The vector X_2 in equation 2 consisted of characteristics of the spouse, including education, age, race, number of functional limitations, and retirement attitudes. We expected that nonemployment rates would be low for spouses who were well-educated, relatively young, and in good health. Respondents who never worked or had not worked in the past ten years were not asked questions about retirement attitudes. We included a missing variable indicator in equation 2 to identify these cases. Sample means for key variables in the model are reported in Appendix Table 1.

To measure how the effect of spousal employment varied by the health status of the spouse, we interacted the indicator for nonemployment by the spouse with indicators of spousal health problems. We considered several alternative measures of spousal health problems, to test the robustness of the model. Our measures of spousal health problems consisted of indicators for more than two functional impairments, more than five functional impairments, and fair or poor overall health. Spousal health problems also entered the retirement equation directly. We expected that the coefficient on the interaction terms would be negative, because workers might delay their own retirement if their spouses left the labor force involuntarily because of health problems. However, we identified individuals with especially frail spouses (those with more than five impairments) to examine whether they curtailed their labor supply in order to provide personal care assistance to their spouses.

We also estimated the model on a sample of married women and men with spouses younger than 62. We expected that the impact on retirement decisions of a nonworking spouse with health problems would be stronger if the spouse was younger than 62 than if the spouse was already eligible for Social Security retirement benefits. The drop in family income associated with the involuntary retirement of the spouse may be especially steep if lost earnings can not be replaced by retirement benefits, and individuals may respond by delaying their own retirement. The sample included 963 married women, with 1,990 person-year observations, and 2,317 married men, with 5,468 person-year observations.

RESULTS

Before estimating multivariate models of the retirement decision, we examined how employment rates varied by the health and work status of the spouse. Table 1 reports the percentage of married women and men who worked for pay in 1992, by the work status of their spouses. About 69 percent of the husbands of the married women in our sample were employed at the time of the 1992 survey. Few husbands appear to have retired involuntarily. Only 7 percent of husbands reported that they left their last job because of poor health, and 5 percent reported that they left because their businesses closed or they were laid off. About 19 percent of husbands reported leaving their last job for other, seemingly more voluntary reasons. Most of those who left for other reasons reported that they “retired” or “quit.” The distribution of employment status was similar for the wives of married men in our sample. About 65 percent of wives were employed at the time of the 1992 survey, while only about 10 percent reported that they left their last job because they had health problems or were laid off.

Married women were significantly more likely to work for pay if their spouses were employed than if they were not employed. Fully 63 percent of those with working husbands

were employed themselves, compared with only 45 percent of those with nonworking husbands. Women were somewhat less likely to work if their nonworking husbands appeared to have left their jobs voluntarily. For example, 49 percent of married women whose husbands were laid off from their last jobs were working, and 47 percent of married women whose husbands left their last jobs because of poor health were working. In contrast, among women whose husbands left their jobs for other reasons, only 44 percent were working.

Differences in employment by the work status of the spouse were even more pronounced among women whose husbands were younger than 62 and thus ineligible for Social Security retirement benefits. As reported in the last column of Table 1, among those whose husbands had not yet reached age 62 and left their job because of health problems, 54 percent were working, compared with just 42 percent of those whose nonworking husbands appear to have left their last job voluntarily. This difference was statistically significant at the 5-percent level. These patterns are consistent with the hypothesis that women tend to leave the labor force at about the same time as their husbands, except when their husbands are forced to retire because of poor health or layoffs. In those cases, women may delay retirement in order to replace some of the earnings lost by the husband, especially if the husband is too young to qualify for Social Security retirement benefits and does not qualify for Social Security disability benefits.

The observed variation in employment patterns by the spouse's retirement decision was different for men. As with married women, married men were less likely to be employed when their spouses were not working than when they were working (75 percent versus 86 percent). However, married men were not less likely to work when their wives retired voluntarily than when they retired for health reasons. Among men whose nonworking wives left their last jobs because of poor health, 69 percent were employed, compared with 76 percent of men whose

nonworking wives left the last job for reasons other than poor health or layoffs. Since most married men ages 51 to 61 had wives younger than age 62, the results did not change much when men with wives ages 62 or older were eliminated from the sample.

The employment patterns of married men and women with nonworking spouses were further explored in Table 2, which reports the percentage of married women and men who worked for pay in 1992, by the health of their spouses. The comparisons were restricted to those with spouses who were not working for pay. Many husbands in our sample reported health problems. About 48 percent of nonworking husbands reported health-related work limitations, 43 percent reported more than two functional impairments, and 33 percent applied for disability benefits. Employment rates were higher for women whose nonworking husbands reported health problems than for those whose nonworking husbands did not report health problems. For example, among those with nonworking husbands who reported health problems that limited their ability to work, 48 percent of married women worked for pay, compared with 42 percent of those whose husbands did not report health-related work limitations.

Differences were larger and generally significant when the comparisons were restricted to women with nonworking husbands younger than 62. For example, the employment rate was 53 percent for women whose nonworking husbands reported health-related work limitations, compared with only 41 percent for women whose nonworking husbands reported no work limitations. These findings suggest that women may be especially likely to delay retirement if health problems force their husbands to retire early, before they become eligible for Social Security retirement benefits.

The observed relationship between employment and spousal health was different for men. The prevalence of disability in our sample was much lower among nonworking wives than

nonworking husbands. Only 31 percent of nonworking wives reported health-related work limitations, and only 15 percent ever applied for disability benefits. Married men whose nonworking wives reported health problems were significantly less likely to work than those whose nonworking wives reported no health problems. Among those whose nonworking wives reported health-related work limitations, for example, 70 percent of married men were employed, compared with 77 percent of married men whose nonworking wives did not report disabilities. These results do not necessarily indicate that the presence of frail nonworking wives leads men to reduce their labor supply. Other factors, such as age and health, may confound the observed relationship. For instance, men with frail wives may be older or in worse health than men married to able-bodied women. Multivariate models, which we examined below, are needed to disentangle these effects.

Another way of considering how health status affects the relationship between the employment of husbands and wives is to examine self-reports of the impact of health problems on family members. Table 3 reports responses to questions posed in the 1992 wave of the HRS about how the onset of health problems affected the labor supply of spouses, for those who reported work disabilities. Among all married men in our sample who reported a work limitation, 86 percent reported that the onset of the disability had no effect on their wives' labor supply. About 10 percent reported that their wives increased their labor supply when they developed health problems, by starting work or increasing work hours. Another 4 percent reported that their wives reduced their labor supply, either by cutting back their work hours or by stopping work altogether, when they became disabled. In these cases, wives may have reduced their labor supply so that they could devote more time to the care of their husbands.

Married men with especially serious disabilities were somewhat more likely to report that their health problems affected the labor supply of their wives. About 13 percent of married men whose health problems prevented them from working at all and 14 percent of married men who were receiving disability benefits reported that their wives increased their labor supply in response to the husbands' disabilities. (Men who qualify for disability benefits may have more serious health problems than those who merely report work limitations to an interviewer.) Moreover, 8 percent of married men who were physically unable to work at all reported that their wives reduced their labor supply, perhaps so that they could devote additional time to caregiving activities. However, regardless of how we defined health limitations, more than three-fourths of married men with disabilities reported that their health did not affect their wives' activities in the workplace.

Work decisions by husbands appear to be less responsive than those of wives to the onset of disability by the spouse. Women with disabilities were less likely than men to report that health problems affected their spouses' labor supply. Almost 96 percent of all married women with disabilities reported that their husbands did not change their work activities in response to their wives' health problems. Fewer than 2 percent reported that their husbands worked more hours or began to work when their health problems began to limit their employment. The percentage of women who reported that their husbands increased their labor supply in response to the wives' health problems increased only slightly when the sample was restricted to married women who received disability benefits or were physically unable to work at all.

Multivariate Models of the Retirement Decision

Table 4 reports the results of our model of retirement decisions for married women and men, in which retirement and spousal employment were jointly estimated. The model measured

the effects of spousal health problems on retirement behavior, where health problems were defined by the presence of more than two functional impairments. Column 1 reports estimates for the retirement decision of wives, and column 2 reports estimates for the nonemployment of their husbands. Columns 3 and 4 report estimates for the retirement decision of married men and the nonemployment status of their wives. The table presents coefficient estimates, with standard errors in parentheses. Asterisks denote statistically significant effects.

Controlling for the health of the spouse, both married women and men were significantly more likely to retire if their spouses were not employed than if they remained at work. However, the impact of spousal nonemployment on retirement decisions was much smaller when the spouse reported health problems. The interaction term between spousal nonemployment and the presence of more than two functional impairments for the spouse was large and negative for both men and women. These results are consistent with the hypothesis that husbands and wives tend to retire together, except when one spouse retires for health reasons. When one spouse retires in poor health, the other spouse often remains at work, perhaps to replace at least part of the earnings lost by the disabled partner.

The error terms in the retirement equation and the nonemployment of the spouse equation were strongly positively correlated, indicating that unobservable factors affecting the retirement decision were correlated with unobservable factors affecting the spouse's employment decision. As a result, it is important that labor supply decisions of husband and wives are estimated jointly.

The coefficients on the other variables in the model were generally consistent with our expectations and with findings from previous research. Retirement rates increased with age and the number of functional impairments. The probability of retiring over the following two years increased sharply at age 61, probably because of the availability of Social Security retirement

benefits at age 62. Men who reported fair or poor health were more likely to retire than men who reported excellent health, but self-reported health status did not affect retirement rates for women, controlling for functional impairments. Women who reported that “taking it easy” was only somewhat or not at all important were significantly less likely to retire than those who reported that it was very important. Retirement attitudes did not significantly affect retirement behavior for men, however.⁹ Participation in defined benefit pension plans on the current job increased retirement rates for men, but not for women, while participation in defined contribution plans delayed retirement for both men and women.

Table 5 reports estimated marginal effects from our retirement models. The reported estimates indicate the impact of spousal employment on retirement decisions, separately for spouses with and without health problems. To test the robustness of our results, we considered three alternative definitions of spousal health problems: more than two functional impairments, more than five functional impairments, and self-reported fair or poor overall health. We also computed marginal effects when the sample was restricted to married men and women with spouses younger than 62. Marginal effects were estimated at the sample means. Asterisks indicate whether retirement rates for the specified groups differed significantly from those for individuals with working spouses.

Across almost all of the definitions of health problems, both men and women with spouses in good health were significantly more likely to retire when their spouses were not employed than when their spouses were employed. For example, when health problems were defined by the presence of more than two functional impairments, retirement rates for married

⁹ Both husbands and wives who were missing information about attitudes toward retirement were significantly less likely to be employed, because respondents who were never employed or had not worked in the past ten years were not asked about their retirement attitudes.

women increased by 5 percentage points when their husbands were not employed, among those whose husbands did not report health problems. Expressed another way, married women with nondisabled husbands who were not employed were about 23 percent more likely to retire than married women whose nondisabled husbands remained at work.¹⁰ For men with nondisabled wives, the effects of spousal employment were even more striking. Retirement rates for married men were almost 9 percentage points higher, or 46 percent higher, when their wives were not working than when they were employed.

Married couples appear to coordinate employment decisions differently when one spouse has health problems. For both men and women, the effect of spousal nonemployment on retirement decisions was much smaller when the spouse reported health problems than when the spouse reported good health. For married women whose husbands reported two or more functional impairments, nonemployment of the husband actually decreased the wife's estimated probability of retirement by 0.6 percentage points, or 3 percent. For married women whose husbands were more seriously disabled (reporting more than five functional impairments), spousal nonemployment decreased retirement rates by 1.2 percentage points, or about 5 percent. (However, neither of these effects were statistically different from zero.) For men with disabled wives who reported more than five functional impairments, nonemployment of the wife decreased retirement rates by 5 percentage points, or about 28 percent. If spousal caregiving demands were important factors in the retirement decision, we would have expected that married men and (especially) women with very frail spouses would have been more likely to retire than those with working spouses or those with nonworking spouses in good health. However, even when we defined spousal health problems by the presence of more than five functional impairments, nonworking spouses with health problems reduced retirement rates instead of

¹⁰ The overall retirement rate for married women in our sample was 22 percent.

raising them. Thus we found no evidence that caregiving demands encourage women or men to withdraw from the labor force.

Spousal health problems had large effects on joint retirement decisions for women with husbands who were younger than 62 and thus not yet eligible for Social Security retirement benefits. Among those with husbands younger than 62, women were 10 percentage points more likely to retire when their husbands were not employed and in good health (relative to when the husbands were working), but were 3 percentage points *less* likely to retire when their husbands were not employed and reported more than five functional impairments. When husbands retire early in good health, their wives are especially likely to retire as well. However, when husbands appear to retire involuntarily before they are eligible to receive Social Security retirement benefits, wives tend to remain at work, probably to offset at least part of the family earnings lost by the disabled husband. Because most of the men in our sample were married to women younger than 62, eliminating men from the sample with wives older than 62 did not substantially affect our results.

CONCLUSIONS

The employment and health status of the spouse appear to have important effects on retirement decisions for married women and men. We found that when the spouse did not have health problems, women and men were more likely to retire if the spouse was not employed than if the spouse was still at work. However, when the spouse had health problems, nonemployment of the spouse generally reduced retirement rates for both men and women. The effects were generally larger when the spouse was younger than 62 and thus ineligible for Social Security retirement benefits. These findings are consistent with the hypothesis that some married persons

remain at work when their spouses are forced by health problems to retire so that they can replace at least part of the earnings lost by the disabled worker.

We found no evidence that spousal caregiving demands affect retirement decisions. Both women and men were more likely to remain at work when their nonworking spouses reported serious health problems than when they reported good health. Instead of withdrawing from the labor force to provide care for their frail spouses, men and women in our sample with spouses in poor health tended to remain at work when their spouses were not employed, probably to offset at least part of the loss in family earnings that resulted when the spouse became disabled. We do not mean to minimize the burdens placed on caregivers, however. Time pressures and emotional costs can be tremendous for those struggling to balance the demands of paid employment with the responsibilities of providing care for frail family members. Nonetheless, spousal caregiving demands do not appear to encourage retirement for many persons at midlife.

These findings underline the importance of marriage in providing insurance for those who become disabled. For many families, the loss of earnings associated with disability can have devastating financial repercussions. However, the ability of one partner to increase work hours and earn more if the other partner is unable to work can prevent the family from falling into poverty, providing a valuable supplement to social insurance programs. The importance of marriage highlights the relative vulnerability of those who are widowed, divorced, or never married.

The family context in which labor supply decisions are made is critical to understanding the retirement process. Characteristics of the spouse have important effects on labor supply. In most couples, married men and women appear to coordinate their retirement decisions so they can retire at about the same time and spend their leisure time with each other. However, when

the spouse retires because of health problems, some married persons delay their own retirement or re-enter the labor force to offset part of the earnings lost by the disabled spouse. Other family responsibilities, such as the need to financially support children or provide care to frail parents, may also play an important role in the retirement decision (Johnson and Lo Sasso 2000; Szinovacz, DeViney, and Davey 2001). Ongoing changes in traditional family and social roles will likely have important effects on retirement patterns, especially the increase in employment and earnings by married women. As policymakers consider reforms to Social Security and retirement policy, it is important that they consider the interdependency of retirement decisions for husbands and wives and how family roles are evolving.

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Table 1
Work Status of Married Women and Men Ages 51-61, By Retirement Status of Spouse

	MARRIED PERSONS WITH SPOUSES OF ANY AGE		MARRIED PERSONS WITH SPOUSES YOUNGER THAN 62	
	Percent Whose Spouse Had Given Work Status	Percent Who Work for Pay	Percent Whose Spouse Had Given Work Status	Percent Who Work for Pay
MARRIED WOMEN				
Husband is still working	69.4	63.3*	80.3	64.5*
Husband reports he is not working:	30.6	45.2	19.7	47.2
Because of poor health	6.9	47.4	6.3	54.1*
Because of layoff	4.6	49.3	3.5	51.7
For other reasons	19.1	43.6	9.9	41.6
MARRIED MEN				
Wife is still working	64.5	85.6*	65.6	85.9*
Wife reports she is not working:	35.5	75.2	34.4	75.9
Because of poor health	4.5	68.7	4.3	69.9
Because of layoff	5.1	78.3	5.1	79.4
For other reasons	25.9	75.5	25.0	76.0

Note: Estimates were based on a sample of 3,355 married women and 3,560 married men between the ages of 61 and 51 in 1992. The sample included 2,394 women with husbands younger than 62 and 3,441 men with wives younger than 62. Estimates were weighted to account for the oversampling of blacks, Hispanics, and Florida residents in the survey design. An asterisk indicates that the estimated proportion who work within the given subsample was significantly different from the proportion who work among those with nonemployed spouses who retired for reasons other than poor health or layoff ($p < .05$).

Source: Authors' computations from the 1992 Health and Retirement Study.

Table 2
Work Status of Married Women and Men Ages 51-61 With Nonworking Spouses, By Health of Spouse

	MARRIED PERSONS WITH SPOUSE OF ANY AGE		MARRIED PERSONS WITH SPOUSES YOUNGER THAN 62	
	Percent Whose Spouse Had Given Health Status	Percent Who Work for Pay	Percent Whose Spouse Had Given Health Status	Percent Who Work for Pay
MARRIED WOMEN				
Husband reports a work limitation				
Yes	47.7	48.3	54.0	52.9*
No	52.3	42.4	46.0	40.6
Husband applied for disability benefits				
Yes	32.5	48.5	42.6	53.4*
No	67.5	43.6	57.4	42.4
Number of functional impairments reported by husband				
More than two	42.9	49.1*	44.4	51.1
Two or fewer	57.1	42.5	55.6	44.1
MARRIED MEN				
Wife reports a work limitation				
Yes	30.6	70.2*	30.6	70.6*
No	69.4	77.2	69.4	78.1
Wife applied for disability benefits				
Yes	14.8	62.4*	14.9	62.7*
No	85.2	77.2	85.1	78.0
Number of functional impairments reported by wife				
More than two	40.6	70.2*	40.0	70.8*
Two or fewer	59.4	78.2	60.0	78.9

Note: Estimates were based on a sample of 1,057 married women and 1,278 married men in 1992 between the ages of 51 and 61 whose spouses did not work for pay. The sample included 493 women with husbands younger than 62 and 1,191 men with wives younger than 62. Estimates were weighted to account for the oversampling of blacks, Hispanics, and Florida residents in the survey design. An asterisk indicates that the difference in work status between those whose spouses had health problems and those whose spouses had no health problems was statistically significant ($p < .05$).

Source: Authors' computations from the 1992 Health and Retirement Study.

Table 3
Self-Reported Effect of Disability on Spouse's Labor Supply

	No Effect	Started Working	Increased Work Hours	Reduced Work Hours	Stopped Working	N
All persons with disabilities						
Men	85.6	6.3	3.9	2.2	2.0	659
Women	95.5	0.6	1.1	2.0	0.8	501
Recipients of disability benefits						
Men	78.3	9.5	4.8	4.5	2.8	308
Women	92.9	2.3	1.0	1.5	2.3	140
Those who cannot work at all						
Men	79.3	9.9	3.4	3.9	3.6	334
Women	94.5	1.1	1.4	1.9	1.2	275

Note: The sample was restricted to married men and women ages 51 to 61 in 1992 who reported health problems that limit their ability to work. Cell entries indicate the percentage of respondents who reported the indicated labor supply response by their spouses. Estimates were weighted to account for the oversampling of blacks, Hispanics, and Florida residents in the survey design.

Source: Authors' computations from the 1992 Health and Retirement Study.

Table 4
Estimates of the Retirement Decision for Married Women and Married Men

	Wife Retires (1)	Husband Not Employed (2)	Husband Retires (3)	Wife Not Employed (4)
Spouse is not employed	0.215 * (0.124)	...	0.360 *** (0.122)	...
Spouse is not employed and has more than two functional impairments	-0.241 ** (0.121)	...	-0.267 *** (0.085)	...
Spouse has more than two functional impairments	0.183 * (0.095)	...	0.084 (0.067)	...
No. of own functional impairments	0.041 *** (0.014)	0.123 *** (0.012)	0.032 *** (0.011)	0.091 *** (0.008)
Overall Health Status [Reference: Excellent]				
Very good	-0.038 (0.073)	...	0.046 (0.056)	...
Good	-0.030 (0.080)	...	0.079 (0.057)	...
Fair	0.081 (0.112)	...	0.242 *** (0.077)	...
Poor	0.309 (0.209)	...	0.664 *** (0.135)	...
Age [Reference: Younger than 54]				
54 to 56	0.022 (0.083)	-0.029 (0.101)	0.092 (0.067)	0.175 *** (0.045)
57 to 60	0.181 ** (0.081)	0.125 (0.090)	0.308 *** (0.063)	0.346 *** (0.047)
61 to 64	...	0.628 *** (0.093)
61 or older	0.728 *** (0.095)	...	0.797 *** (0.071)	0.856 *** (0.069)
65 or older	...	0.766 *** (0.106)
Race [Reference: White or other]				
Black	0.073 (0.082)	0.253 *** (0.076)	0.103 (0.065)	-0.118 ** (0.060)
Hispanic	0.078 (0.114)	0.080 (0.109)	0.098 (0.075)	0.187 *** (0.072)

(Continued)

Table 4 (Continued)

	Wife Retires (1)	Husband Not Employed (2)	Husband Retires (3)	Wife Not Employed (4)
Education [Reference: High school graduate]				
Did not complete high school	0.153 ** (0.077)	0.122 * (0.072)	0.027 (0.055)	0.199 *** (0.050)
Fewer than 4 years of college	-0.079 (0.074)	-0.134 * (0.077)	-0.184 *** (0.058)	-0.194 *** (0.047)
Four or more years of college	0.065 (0.078)	-0.190 *** (0.072)	-0.169 *** (0.057)	-0.346 *** (0.054)
Financial assets (\$10,000)	0.0004 (0.002)	-0.0006 (0.002)	-0.0005 (0.001)	0.005 *** (0.001)
Pension Coverage on Current Job				
Defined Benefit	0.003 (0.058)	...	0.176 *** (0.042)	...
Defined Contribution	-0.115 * (0.059)	...	-0.092 ** (0.044)	...
Attitudes toward Retirement				
[Reference: Taking it easy" is very important]
"Taking it easy" is moderately important	-0.017 (0.070)	-0.081 (0.084)	0.010 (0.054)	-0.143 *** (0.048)
"Taking it easy" is somewhat or not all important	-0.154 ** (0.069)	-0.177 ** (0.077)	-0.049 (0.052)	0.004 (0.046)
Never plan to retire	-0.020 (0.100)	-0.028 (0.075)	-0.103 (0.063)	-0.412 *** (0.070)
Missing	0.144 (0.431)	1.383 *** (0.094)	-0.601 (0.498)	1.041 *** (0.072)
Constant	-1.124 *** (0.111)	-0.950 *** (0.098)	-1.444 *** (0.095)	-0.646 *** (0.045)
Correlation of error terms		0.397 *** (0.065)		0.246 *** (0.070)
Log likelihood		-2847.38		-5897.21

Note: Cell entries report coefficient estimates, with asymptotic standard errors in parentheses. The sample was restricted to 1,249 married women and 2,377 married men who were between the ages of 51 and 61 working full time at study baseline (in 1992). Respondents were observed up to three times until they retire. The sample included 2,919 person-year observations for women and 5,806 person-year observations for men. Significance: **=10%; *=5%; ***=1%

Source: Authors' computations from the Health and Retirement Study

Table 5
Estimated Marginal Effects of Spousal Employment and Health on Retirement Decisions

	Definition of Spousal Health Problems		
	More Than Two Functional Impairments	More Than Five Functional Impairments	Self-Reported Fair or Poor Health
All MARRIED WOMEN			
Husband is not employed and does not report health problems	0.051*	0.037	0.042*
Husband is not employed and reports health problems	-0.006	-0.012	0.044
All MARRIED MEN			
Wife is not employed and does not report health problems	0.086***	0.066**	0.079***
Wife is not employed and reports health problems	0.023	-0.054	-0.002
All MARRIED WOMEN WITH HUSBANDS YOUNGER THAN 62			
Husband is not employed and does not report health problems	0.103**	0.082*	0.107**
Husband is not employed and reports health problems	-0.006	-0.034	0.030
All MARRIED MEN WITH WIVES YOUNGER THAN 62			
Wife is not employed and does not report health problems	0.088***	0.060*	0.067**
Wife is not employed and reports health problems	-0.017	-0.063	-0.025

Note: Cell entries report marginal effects, relative to having a working spouse. Estimates were based on a joint model of the labor supply of husbands and wives, which controls for health, demographics, education, pension coverage, financial assets, and retirement preferences, as specified in Table 4. The sample was restricted to 1,249 married women and 2,377 married men who were between the ages of 51 and 61 working full time at study baseline (in 1992). The sample included 963 married women and 2,317 married men with spouses younger than age 62. Respondents were observed up to three times until they retire. The full sample included 2,919 person-year observations for women and 5,806 person-year observations for men. The sample restricted to those with spouses younger than 62 included 1,990 person-year observations for women and 5,468 person-year observations for men. Significance: *'=10%; **'=5%; ***'=1%

Source: Authors' computations from the Health and Retirement Study

Appendix Table 1
Sample Means

	Married Women	Married Men
Retired	0.221	0.188
Spousal Employment and Health		
Not employed	0.415	0.406
More than two functional impairments	0.285	0.345
Not employed and more than two functional impairments	0.172	0.181
More than five functional impairments	0.112	0.126
Not employed and more than five functional impairments	0.085	0.084
In fair or poor health	0.200	0.151
Not employed and in fair or poor health	0.135	0.099
No. of Own Functional Impairments	2.155 (2.104)	1.484 (1.794)
Overall Health Status		
Excellent	0.255	0.245
Very good	0.363	0.346
Good	0.277	0.296
Fair	0.091	0.096
Poor	0.015	0.018
Age		
Younger than 54	0.199	0.183
54 to 56	0.320	0.290
57 to 60	0.356	0.365
61 or older	0.125	0.163

(Continued)

Appendix Table 1 (Continued)

	Married Women	Married Men
Race		
White	0.799	0.819
Black	0.130	0.106
Hispanic	0.071	0.075
Education		
Did not complete high school	0.180	0.227
High school graduate	0.414	0.327
Fewer than 4 years of college	0.212	0.202
Four or more years of college	0.194	0.244
Financial Assets (\$10,000)	6.061	6.021
Pension Coverage on Current Job		
Defined Benefit	0.415	0.411
Defined Contribution	0.318	0.335
Attitudes toward Retirement		
Taking it easy” is very important	0.411	0.387
“Taking it easy” is moderately important	0.242	0.212
“Taking it easy” is somewhat or not all important	0.252	0.250
Never plan to retire	0.092	0.147
Missing	0.003	0.004

Note: Standard deviations are in parentheses. The sample was restricted to 1,249 married women and 2,377 married men who were between the ages of 51 and 61 working full time at study baseline (in 1992). Respondents were observed up to three times until they retire. The sample included 2,919 person-year observations for women and 5,806 person-year observations for men.

Source: Authors’ computations from the Health and Retirement Study